USPCI
A Subsidiary of
Union Pacific Corporation

Erosion and Sedimentation Control Plan

Rose Chemicals Site

Holden, Missouri

prepared for:
Clean Sites, Incorporated
Alexandria, Virginia

on behalf of the:
Rose Chemicals
Steering Committee

submitted to:
U.S. EPA, Region VII
Kansas City, Kansas

prepared by:
Terracon, Inc., for
U.S. Pollution Control, Inc.
Riverside, Missouri
USPCI Project No. 91398

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Drawing 3 Soil Excavation and Building Demolition Plan (Revised)

1. INTRODUCTION

This Erosion and Sedimentation Control Plan (ESCP) has been developed to comply with the State of Missouri erosion and sedimentation control regulations (10 CSR 20-6.200). The Plan was prepared based on information contained in the Remedial Action Work Plan prepared for the Rose Chemicals Site, the Clean Sites Remedial Design Document, and a site walk-through conducted by USPCI and Terracon representatives. This Plan is required because vegetative cover or concrete will be removed from more than 5 acres of ground at the Site.

Wherever possible, stabilization will be the preferred method of controlling erosion and sedimentation. Drainage swales, silt fences, and coffer dams will be constructed as needed during the Site activities to reduce the amount of storm water that enters the contaminated portions of the Site and the amount of silt that enters the creeks. The drawing (Clean Sites Drawing 3, Soil Excavation and Building Demolition Plan, Revised) provided at the end of this Plan identifies the approximate boundaries of the greenbelt around the creek and the approximate location of a drainage diversion swale to be constructed to prevent storm water from entering contaminated work areas.

2. SEDIMENTATION AND EROSION CONTROLS

2.1 STABILIZATION PRACTICES

Soil contamination has not been detected near the banks of the unnamed tributary or at the top of the slope leading to East Pin Oak Creek; therefore, it will be possible to maintain a minimum 15 foot to 30 foot wide greenbelt (vegetation and trees) between the stream and any soil disturbances to prevent sediment flow downhill. It is anticipated that some trees and shrubs will be removed by the clearing activities for the Site remediation. In general, the USPCI crews will not deface, injure, or destroy trees or shrubs, nor will they remove or cut any that do not directly affect the remediation work. If the USPCI Project Supervisor finds that trees may possibly be defaced, bruised, injured, or otherwise damaged by equipment or operations, he will direct the work crew to provide temporary protection around them (i.e., boards, planks, poles). Any tree scarred by USPCI operations will be restored as nearly as possible to its original condition. Scars will be coated as soon as possible with an approved tree wound dressing (tree tar). Any trees or shrubs inadvertently damaged beyond saving will be removed and replaced with trees or shrubs of the same size and species.

Any areas of natural/native grassland which are graded or otherwise heavily disturbed by remedial activities will be revegetated. Following recontouring of the disturbed sites, the soil will be prepared, seed will be broadcast, and mulching and care will be completed in accordance with the Remedial Action Work Plan and the specifications in Section 02936 of the Design Document.

2.2 Structural Practices

USPCI will construct a low berm and swale across the site to divert surface run-off away from the lower excavation areas. It will run from the southwest corner of the Main building (the truck bays), around monitoring wells MW-106 and MW-206, across the Site eastward, below the Site facilities pad and staging areas, and north of the South Warehouse. An arm of this berm and swale will extend south on the east side of the South Warehouse between the warehouse and the east Site border fence. Surface run-off will be diverted from the Site facilities area to the drainage ditch on the southern edge of the property, and down to the unnamed tributary leading to East Pin Oak Creek. This berm and swale will be cut from the existing surface soils identified in previous studies as uncontaminated, and will run through areas of the Site that have been eliminated by these studies from the remediation activities.

Structural practices will also include the reduction of airborne particulate emissions from the Site during remedial activities. Airborne particulates will be minimized by spraying water onto non-vegetated areas as necessary. Only the amount of water sufficient to provide adequate dust suppression and reduction of airborne particulate emissions will be applied to denuded areas.

Silt fencing will be utilized, as needed, along the southern edges of the excavation areas to prevent silt migration from the excavated areas. Additional fencing may be placed along the southern boundary of the site should it become apparent that additional erosion prevention is required.

2.3 Unnamed Tributary and East Pin Oak Creek Remediation

As part of the Site remediation, USPCI will remove contaminated sediments from the unnamed tributary and East Pin Oak Creek. Sediment removal will be performed in a series of 200-foot stretches of the tributary or creek until all contamination has been removed.

The remediation will begin by building a coffer dam downstream of the initial 200-foot stretch to catch any sediment before removal activities begin. The area directly upstream of the coffer dam will act as a sedimentation basin to prevent excessive sediments, both contaminated and uncontaminated, from moving further downstream. The length of stream will be cleaned, the sediments trapped by the coffer dam removed, and then a new dam will be built approximately 200 feet further downstream. This procedure will be repeated until the remediation is completed. The unnamed tributary and East Pin Oak Creek beds will be restored with sand and gravel to reduce future erosion.

Preparations will have been made to re-route the outflow from the Holden waste water treatment plant and additional provisions will be made to temporarily re-route the stream flow from the plant outfall to the next junction of the downstream feeder creek. This re-routing may include the use of 12-inch PVC pipe and a large dam structure. Pumps and hoses would be utilized to move the collect water from above the dam to the 12-inch diversion line. The diversion pipe would follow the stream across areas of the site not in use for removal activities. After removal of the contaminated sediments had

been verified and backfill operations completed, the stream flow would be returned to follow its normal course.

3. General Housekeeping Practices

USPCI personnel will comply with all applicable Federal, State, County, and Municipal environmental regulations/ordinances. Special measures will be taken to prevent chemicals, fuels, oils, greases, and other materials from entering public waters. Except as explicitly noted herein, water used in personnel and equipment decontamination, and any other waste waters, will not be allowed to drain or be directly discharged into any stream, lake, or wetland. Additionally, no vehicle or equipment maintenance, including fueling, will be allowed in an area which could cause contamination to the environment. Uncontrolled dumping of waste products anywhere on the Site is prohibited.

The wash water from the decontamination of equipment and personnel will be contained in a storage tank at the decontamination facility. During the final exterior cleaning of temporary facilities, which are located in the Support Zone (SZ), the waters will not be contained because of the low probability of contamination being deposited on the exteriors of the SZ buildings. Clean Sites will test all contained waste water for the presence of contamination.

Special measures will be taken to prevent spillage of oils, fuels, and contaminated materials. However, if an accidental spill occurs, the spilled material will be contained and collected in accordance with the Site-Specific Emergency Contingency Plan and the Remedial Action Health and Safety Plan. After the removal of any soil or other material associated with a release, the underlying media (soil, concrete, etc.) will be tested to verify that no contamination remains.

If soil is contaminated by a spill, remediation will be conducted in a phased approach by removing successive 3-inch horizons within the affected area, and conducting verification sampling after each lift has been removed until visible contamination has been removed. Contaminated soil will be drummed and transported to USPCI's Grassy Mountain disposal facility. Restoration will only be conducted in areas where a substantial amount of contaminated soil has been removed. Restoration will consist of bringing the area back to grade using clean soil brought in from an off-site borrow source. If the spill occurs in an area supporting relatively undisturbed native vegetation, and the remediation causes loss of vegetation, a revegetation program will be undertaken.

Upon completion of the project, USPCI will, unless otherwise instructed in writing by Clean Sites, remove all signs of temporary facilities and operations, such as Site access roads, work areas, structures, foundations of temporary structures, and stockpiles of excess or waste materials. When appropriate, disturbed areas will be backfilled and graded, and those areas that supported vegetation prior to the project-related activities will be revegetated as previously described.

4. INSPECTIONS

All sedimentation and erosion control facilities will be inspected each day during the Project Supervisor's daily site tour. Any deficiencies observed during these daily inspections will be recorded in the Project Log Book, along with the action taken to correct the deficiency, and the date and time when the action was completed. The Project Log Book will be available for inspection during normal hours of operation.